

CLAIMS

What is claimed is:

- 1 1. A hub and probe system in a wireless communications structure, comprising:
2 (a) a hub for communicating at least one first signal, wherein the signal is
3 communicated via evanescent waves created by an exciter;
4 (b) a probe for receiving the signal;
5 (c) conductive elements included in walls of the wireless communications
6 structure for receiving at least one second signal from the probe, the
7 conductive elements communicating the second signal to the exciter; and
8 (d) wherein the second signal is passed back to the hub via the exciter.
- 1 2. The system as recited in claim 1, wherein at least one of the first signal and the
2 second signal is communicated to the hub from at least one of an external source
3 and an internal source.
- 1 3. The system as recited in claim 2, wherein at least one of the first signal and the
2 second signal includes information from at least one of a satellite television, a
3 cable television, an Internet provider, a computing device, a phone provider, a
4 DVD player, a television, and a telephone.
- 1 4. The system as recited in claim 2, wherein the external source includes information
2 communicated from outside the structure.
- 1 5. The system as recited in claim 2, wherein the internal source includes information
2 communicated from inside the structure.
- 1 6. The system as recited in claim 1, wherein the hub includes at least one of a
2 diplexer, a power amplifier, a transmitter, a receiver, a frequency converter, a
3 modem, a security controller, and a network processor.
- 1 7. The system as recited in claim 6, wherein the diplexer allows at least one of full
2 duplex transmission and half duplex transmission of data.

1 8. The system as recited in claim 7, wherein half duplex transmission is accomplished
2 by a transmit/receive switch.

1 9. The system as recited in claim 1, wherein the probe is connected to a remote
2 device that utilizes information included in at least one of the first signal and the
3 second signal.

1 10. The system as recited in claim 1, wherein at least one of the first signal and the
2 second signal are at a radio frequency between 0.5-100 MHz.

1 11. The system as recited in claim 1, wherein the first signal and the second signal are
2 at different radio frequencies.

1 12. A method for utilizing a hub and probe system in a wireless communications
2 structure, comprising the steps of:
3 (a) communicating at least one first signal, wherein the signal is communicated
4 via evanescent waves created by an exciter;
5 (b) allowing a probe to receive the signal; and
6 (c) receiving at least one second signal from the probe via the exciter, the
7 exciter receiving the second signal from the probe via conductive elements
8 in walls of the structure.

1 13. The method as recited in claim 12, wherein the at least one of the first signal and
2 the second signal is communicated from at least one of an external source and an
3 internal source.

1 14. The method as recited in claim 13, wherein at least one of the first signal and the
2 second signal includes information from at least one of a satellite television, a
3 cable television, an Internet provider, a computing device, a phone provider, a
4 DVD player, a television, and a telephone.

1 15. The method as recited in claim 13, wherein the external source includes
2 information communicated from outside the structure.

- 1 16. The method as recited in claim 13, wherein internal source includes information
2 communicated from inside the structure.
- 1 17. The method as recited in claim 12, wherein at least one of a diplexer, a power
2 amplifier, a receiver, a frequency converter, a modem, a transmitter, a security
3 controller, and a network processor are included for communicating the first
4 signal.
- 1 18. The method as recited in claim 17, wherein the diplexer allows at least one of full
2 duplex transmission and half duplex transmission of data.
- 1 19. The method as recited in claim 18, wherein half duplex transmission is
2 accomplished by a transmitter switch.
- 1 20. The method as recited in claim 12, wherein the probe is connected to a remote
2 device that utilizes information included in at least one of the first signal and the
3 second signal.
- 1 21. The method as recited in claim 12, wherein at least one of the first signal and the
2 second signal are at a radio frequency between 0.5-100 MHz.
- 1 22. The method as recited in claim 12, wherein the first signal and the second signal
2 are at different radio frequencies.